

Lahontan Regional Water Quality Control Board

March 28, 2016

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Draft Final Data Gap Well Installation Work Plan, Non-CERCLA Site OT071, Former George Air Force Base, Victorville, San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Water Board) staff received the *Draft Final Data Gap Well Installation Work Plan, Non-CERCLA Site OT071, Former George Air Force Base (GAFB; Work Plan)* on February 25, 2016 and comments were requested by March 25, 2016. This letter conveys Water Board comments on the Draft Final Work Plan.

The Draft Final Work Plan generally addresses Water Board comments on the Draft version. The Draft Final Work Plan also provides additional information regarding the vadose zone model that will be used to estimate future impacts to groundwater from dieldrin in the soil in addition to vadose zone modeling procedures – details that were not available when the Air Force issued the Draft Work Plan. Water Board and Department of Toxic Substances (DTSC) staff are still discussing with CB&I staff the applicability of the proposed HYDRUS vadose zone model for colloidal transport of dieldrin through the vadose zone. We recommend that the remaining issues be documented in a technical memorandum than can be inserted into an additional appendix (e.g., Appendix D) to document the Water Board approved details for the HYDRUS modeling and the evaluation of colloidal particle sizes after these issues are resolved. The Final Work Plan can be issued with a tab for the additional appendix so that the field work can proceed to install the wells and conduct the soil boreholes.

We commend the Air Force and CB&I for the collaborative spirit in which this Work Plan is being developed.

Comment 1, Document Title

The Draft version of the Report was titled "Data Gap Investigation Work Plan...." whereas the Draft Final was titled "Data Gap Well Installation Work Plan..." Considering that the Work Plan addresses more than well installation and for the sake of consistency, we request the document title not be changed from draft through final and the Air Force use the "Data Gap Investigation Work Plan" title for the final version of the document.

AMY L. HORNE, PhD, CHAIR | PATTY Z. KOUYOUMDJIAN, EXECUTIVE OFFICER

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Comment 2, Page 3-2, 2nd Paragraph, 1st Bullet, 5th line

There appears to be a typo: replace "bgun" with "begun."

Comment 3, Page 3-5, 6th Paragraph (Section 3.3.2.3), 2nd Sentence

There appears to be another typo: replace "tho" with "the."

Comment 4, Page 3-6, Section 3.3.2.7 (Bentonite Seal)

Based on the March 21, 2016 discussion between the Water Board, DTSC, and CB&I, we recommend that the bentonite seal be installed with a 6:1 to 7:1 ratio of hydrated bentonite powder to fine sand (#40 sand or finer) to be tremied into place. The sand is to prevent the propagation of cracks and loss of seal integrity as the seal dries out.

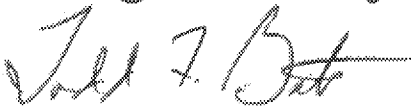
Comment 5, Page 3-7, Section 3.3.2.8 (Annular Seal)

The Draft Final Work Plan indicated 3 to 5 percent by weight bentonite for the cement-bentonite mix for the annular seal. Based on the March 21, 2016 discussion between the Water Board, DTSC, and CB&I, we recommend that the target bentonite content be limited to 3 to 4 percent by weight.

Comment 6, Appendix A (Standard Operating Procedures), EI-GS018.pdf, Section 6.4

Dilatancy testing should be conducted to distinguish between silts and clays, and plasticity observations should be noted following the standard Unified Soil Classification System (USCS) field methods. For gravels, the general rock type (e.g., granite, quartzite, limestone, etc.) and color should be mentioned on boring logs. The boring logs should be reviewed by a Professional Geologist.

If you have any questions regarding this letter, please contact me at (760) 241-7340, Todd.Batthey@waterboards.ca.gov or Cindi Mitton (760) 241-7413, CMitton@waterboards.ca.gov.



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